Contents

Section 7

West Desert Basin

REGULATION/INSTITUTIONAL CONSIDERATIONS

7.1 INTRODUCTION

This section discusses the agencies responsible for water regulation in the West Desert Basin. This includes consideration of water rights, water quality and environmental concerns.

There are three state agencies primarily responsible for the regulation of water in the West Desert Basin. The Division of Water Rights, under the direction of the State Engineer, regulates water allocation and distribution according to state water law. Water quality is regulated at the state level by the Department of Environmental Quality through two agencies, the Division of Water Quality and the Division of Drinking Water. These agencies operate in accordance with the Utah Water Quality Act and the Utah Safe Drinking Water Act. Water quality is also regulated by various provisions of federal legislation.

7.2 SETTING

Water regulation is generally carried out under the direction of the aforementioned state agencies, although some federal agencies become involved when water issues are included in their mandates. Local, public and private institutions and entities usually manage and operate water systems at the local level.

Early water rights were controlled through the hierarchy of the LDS church. As secular governmental structures emerged, control of water rights was shifted to city and territorial governments. Disputes concerning water rights were resolved by county water commissioners and, after statehood in 1896, by the Division of Water Rights.

Regulatory systems are all ready in place to manage any conflicts and to provide for orderly future planning and development of the basins water resources.

7.2.1 Governmental Regulations

There is extensive regulation of the water resources throughout the West Desert Basin. Water masters and ditch riders operate the systems within each irrigation company. Cities and towns operate the community systems. Various types of entities administer and manage water delivery.

Local Entities - The Health Department and the Southwest Utah Board of Health are involved at the local level in health-related water matters. They carry out state regulations and local policy related to wells, their construction, and septic tanks and their effects on water quality.

Department of Natural Resources - This state agency is concerned with water resources and their relationship to the environment. The Division of Water Rights is responsible for water allocation, distribution, dam safety and stream channel alteration. The Division of Water Resources regulates the cloud seeding program and is responsible for state water resources planning and development. The Division of

Wildlife Resources is responsible for water related wildlife habitat and aesthetics and the water-based recreational activities. See sections 9,14 and 15, respectively.

Department of Environmental Quality - This state agency has primary responsibility for water quality. The Division of Drinking Water Quality ensures everyone has a high quality, dependable source of culinary water. The Division of Water Quality regulates the quality of streams, lakes and groundwater. The activities of these two agencies are discussed in Section 11, Drinking Water and Section 12, Water Quality.

Federal - Federal agencies also have responsibilities for water quality and environmental concerns. The Environmental Protection Agency has federal responsibility for water quality through the federal Clean Water Act and the Safe Drinking Water Act, although the state of Utah has primacy for carrying out these regulations. The Fish and Wildlife Service has a role in protecting water-related environments. Particularly where they affect endangered fish, waterfowl and plants. There are many types of organizations involved in water delivery to irrigated cropland. In addition to the mutual irrigation companies there are ditch systems, water user groups and private systems. In general, ditch systems have several owners, large water user groups and private systems consisting of only one or two water rights owners.

7.2.2 Existing Local Institutions and Organizations

Local organizations generally carry out the distribution of water in accordance with existing water rights and in compliance with the rules and regulations administered by the State Engineer. These local institutions, entities and organizations have also completed most of the water development. Distribution systems along with local entities formed under specific enabling legislation are described below.

Water Conservancy Districts - These are created under Title 17A-2-1401 of the *Utah Code Annotated.* They are established by District Court in response to a formal petition and are governed by a Board of Directors. The local county commission appoints the Board of Directors when the district consists of a single county. The governor appoints the Board of Directors when two or more counties are involved. Water conservancy districts have very broad powers. They include constructing and operating water systems, levying taxes and contracting with government entities. These districts include incorporated and unincorporated areas. There are three districts in the basin: the Bear River Water Conservancy District, the Millard County Water Conservancy District and the Rush Valley Water Conservancy District.

Mutual Irrigation Companies - These are the most common water development and management entities in the basin. They may be either profit or nonprofit, and they are formed under the State of Utah Corporation Code. In general, stockholders are granted the right to a quantity of water proportional to the number of shares they hold and assessments are levied similarly. In the West Desert Basin there are 36 Mutual Irrigation Companies. There are 26 irrigation companies with more than 100 acres of service area. These are listed in Table 6-2.

Water Companies - These are entities, such as special service districts, formed to provide water to subscribers. Private water companies operated for profit are regulated by the Division of Public Utilities. There are six water companies in the basin. They are: Erda Acres Company, Golden Gardens Water Company, Ophir Canyon Water Association, S & W Trailer Park Water Company, Silver Spurs Water Company and the Stansbury Park Improvement District. These are included in Table 11-1 alone with the Municipal Water Utilities.

City Water Utilities - These are utilities operated by incorporated cities and towns to provide water to residents and subscribers. Municipalities can form corporations to deliver water inside all or any part of a city boundary. Counties have the same authority in unincorporated areas. The Utah Code Annotated and local ordinances provide the legal framework for water system operation. Local entities may pass ordinances regulating water use. There are 11 City Water Utilities. They are listed in Table 11-1 along with the private water companies.

Other - Other water management related organizations include special improvement districts and watershed management districts. Within the basin there are two: Lakepoint Improvement District and Hansel Valley Watershed District.

7.3 WATER RIGHTS AND REGULATIONS

The State Engineer is responsible for determining whether there is unappropriated water and if additional applications will be granted. This is accomplished through data analysis and consideration of public input.

Before approving an application to appropriate water, the State Engineer must find: (1) there is unappropriated water in the proposed source; (2) the proposed use will not impair existing rights, (3) the proposed plan is physically and economically feasible; (4) the applicant has the financial ability to complete the proposed works; and (5) the applicant has filed in good faith and not for the purpose of speculation or monopoly. The State Engineer shall withhold action on or reject an application if he determines it will interfere with existing prior rights or prove detrimental to the public welfare, public recreation or the natural stream environment.

Utah water law allows changes in the point of diversion, place of use, and/or nature of use of an existing right. To accomplish such a change, the water user must file a change application with the Division of Water Rights. The approval or rejection of a change application depends largely on whether or not the proposed change will impair other vested rights. However, compensation can be made, or conflicting rights may be acquired. Approved applications and stock in mutual water companies are considered personal property. As such they can be bought and sold in the open market.

In the appropriation process, the State Engineer analyzes the available data and in most cases, conducts a public meeting to present findings and receive input before adopting a final policy regarding future appropriation and administration of water within an area. Through regulatory authority, the State Engineer influences water management by establishing diversion limitations or *duty of water* for various uses and by setting policies on water administration for surface water and groundwater supplies. The duty of water includes an allowance for reasonable distribution system and irrigation system inefficiencies.

The Division of Water Rights is responsible for a number of functions which include: (1) distribution of water in accordance with established water rights; (2) adjudication of water rights under an order of a state district court; (3) approval of plans and specifications for the construction of dams and inspection of existing structures for safety; (4) licensing and regulating the activities of water well drillers; (5) regulation of geothermal development; (6) authority to control streamflow, and reservoir storage, or releases during a flooding emergency; and (7) regulation of stream channel alteration activities.

Water rights, and even approved applications, can be sold or purchased much like any other property right. The dollar value or worth of individual water rights varies greatly for the following reasons: (1) reliability of the water source; (2) priority of the water right; (3) water quality; (4) availability of other water sources; and (5) the existing demand. Although it is true that water rights have significant value, they

may be lost if left unused for a sufficiently long period of time. Privately held water rights can be lost by five consecutive years of non-use.

In areas where surface and groundwater are considered to be fully appropriated, the potential for new water rights appropriations is very limited. Applications which have been previously approved may be developed and perfected.

7.3.1 Current Regulations

Under Utah water law, the distribution and use of water is based on the doctrine of prior appropriation. The Division of Water Rights is charged with the regulation and administration of water rights. To facilitate the administration and management of water rights, the state has been divided into Water Rights Management Areas (see Figure 7-1). For each of the areas, a regional engineer is assigned to oversee and manage the day-to-day activities. The Columbia River Drainage is designated as Area 11. The remainder of Box Elder County within the basin is designated as Area 13. These two water rights areas are managed out of the State Engineer's Northern Regional Office in Logan. Tooele and Rush Valleys constitute Area 15, the Great Salt Lake Desert is Area 16, the Ibapah and Goshute area west of the Deep Creek Mountains is designated as Area 17, and the northern and central portions of Snake Valley comprise Area 18. These areas are managed out of the Weber River Regional Office in Salt Lake. Pine Valley is designated as Area 14 and Hamlin Valley is Area 19. These areas are managed out of the State Engineer's Southwest Regional Office in Cedar City.

On April 24, 1956, the First District Court of Box Elder County ordered the State Engineer "to make a determination and adjudication of all rights to the use of water in the Columbia River Basin" with priority given to George Creek drainage. A book of proposed determinations for the George Creek area was published on December 1, 1959. The proposed determination for the remainder of the Columbia River Drainage (Goose Creek, Raft River, and Clear Creek) was published on August 1, 1965. A court order to adjudicate the Tooele and Rush Valleys was made on June 2, 1956. The proposed determination for the Rush Valley area was published on August 10, 1973. The Tooele Valley area was apportioned into three divisions. A book of proposed determinations for the Grantsville Division was published on November 1, 1985. A book of proposed determinations for the Erda/Lakepoint Division was published on December 2, 1989. A book of proposed determinations for the Tooele Division has not yet been published.

Goshute Valley & Deep Creek Mountains

Although there are specific areas within the basin currently closed to new water rights applications, much of the West Desert Basin remains open to new applications. The general status of water right applications and water right policy within West Desert Basin is summarized in Table 7-1.

7.4 WATER QUALITY CONTROL

The discharge of pollutants is regulated under the Utah Water Quality Act (UWQA) found in *Utah Code Annotated, Title 26, Chapter 11.* The Utah Water Quality Board (UWQB) has developed rules, regulations, policies and continuing planning processes necessary to

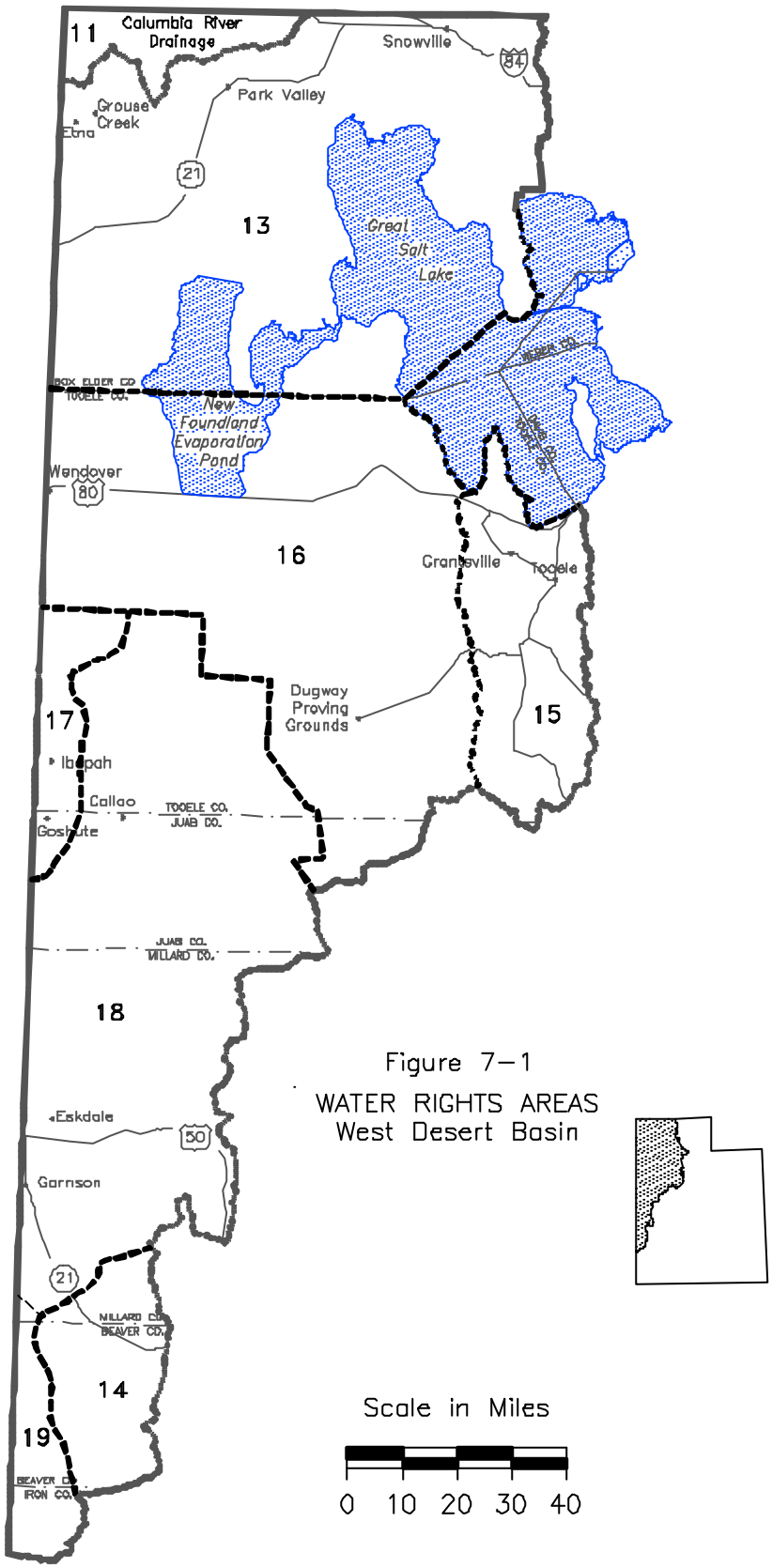

Figure 7–1

WATER RIGHTS AREAS
West Desert Basin

Scale in Miles

0 10 20 30 40

Table 7-1
GENERAL STATUS OF WATER RIGHTS
West Desert Basin

AREA	SUBAREA	STATUS AND GENERAL POLICY
11	George Creek & Johnson Creek	Status: Proposed Determination published in December 1, 1959. Policy: Both Surface and Groundwater appropriations are open.
	Goose Creek, Raft River & Clear Creek	Status: Proposed Determination published in August 1, 1965. Policy: Both Surface and Groundwater appropriations are open.
13	Grouse Creek	Status: Proposed Determination published in January 1, 1966. Policy: Both Surface and Groundwater appropriations are open.
	Park Valley	Status: Proposed Determination published in April 1, 1968. Policy: Both Surface and Groundwater appropriations are open.
	Snowville/Promontory	Status: Proposed Determination published in April 1, 1969. Policy: Much of area closed to new applications. A few exceptions for domestic and stock watering
	Southwestern Box Elder	Status: Proposed Determination published in May 1, 1970. Policy: Both Surface and Groundwater appropriations are open.
15	Rush Valley	Status: Proposed Determination published in August 10, 1973. Policy: Both Surface and Groundwater appropriations are open.
	Grantsville Division	Status: Proposed Determination published in November 1, 1985. Policy: Closed to both Surface and Groundwater applications.
	Erda/Lakepoint	Status: Proposed Determination published in December 22, 1989. Policy: Closed to both Surface and Groundwater applications.
	Tooele	Status: Not Adjudicated. Policy: Closed to both Surface and Groundwater applications.
16	Great Salt Lake Desert	Status: Not Adjudicated. Policy: Both Surface and Groundwater appropriations are open.
17	Ibapah/Goshute	Status: Not Adjudicated. Policy: Both Surface and Groundwater appropriations are open.
18	Snake Valley	Status: Not Adjudicated. Policy: Both Surface and Groundwater appropriations are open.
14	Pine Valley	Status: Not Adjudicated. Policy: Both Surface and Groundwater appropriations are open.
19	Hamlin Valley	Status: Proposed Determination published on October, 1 1969. Policy: Both Surface and Groundwater appropriations are open.

prevent, control and abate new or existing pollution, of surface water and groundwater. These are carried out by the Division of Water Quality. They are described in Section 7 of the State Water Plan.

Water quality certification by the state is covered under Section 401 of the federal Water Pollution Control Act, 1977. This act requires state certification on any application for a federal license or permit resulting in discharge into waters, and/or wetlands of the United States. These activities include, but are not limited to, the construction or operation of the discharging facilities. Any discharges shall comply with applicable state water quality standards and the applicable provisions of the Clean Water Act (CWA). In addition, the UWQA adopts and enforces "Ground Water Protection Rules." These rules are building blocks in a formal program to protect beneficial uses of groundwater in Utah.

Three main regulatory philosophies are emphasized. They are: (1) Deterioration of groundwater quality shall be prohibited; (2) prevention of groundwater contamination is preferable to after-the-fact pollution remediation, and (3) provide protection based on the differences in existing groundwater quality. There are five significant components: (1) Groundwater quality standards, (2) groundwater classification, (3) groundwater protection levels, (4) aquifer classification procedures, and (5) a groundwater discharge permit system. Statutory authority for the regulations is contained in Chapter 19-5 of the Utah Code Annotated.

The groundwater permitting system controls activities affecting groundwater quality. A permit will be required if, under normal circumstances, there may be a release to groundwater. Owners of existing facilities will not be obligated to apply for a groundwater discharge permit immediately if they were in operation, or under construction, before February 10, 1990. Owners of such facilities are required to notify the Executive Secretary of the UWQB of the nature and location of their discharge.

These regulations provide for a "permit by rule" for certain facilities or activities. Many operations pose little or no threat to groundwater quality. Some are already adequately regulated by other agencies. These are automatically extended a permit. Therefore, facilities qualifying under provisions of the Utah Administrative Rules, Section R317-6-6.2, will administratively be extended a groundwater discharge permit (permit by rule). However, these operations are not exempt from the applicable class limits on parameters such as total dissolved solids nor groundwater quality standards.

The authority for Clean Water Act, Section 401 certification, commonly known as 401 Water Quality Certification, is carried out through the UWQB by the Division of Water Quality. Whether the Environmental Protection Agency (EPA) administers a CWA program directly or delegates it to a state (i.e. primacy delegation), EPA retains an oversight role to insure compliance with all regulations, rules and policies.

Local communities are encouraged to set up and carry out a "Local Aquifer Protection Management Plan." Contact the Division of Water Quality for information.

7.5 DRINKING WATER REGULATIONS

The Drinking Water Board is responsible for setting and enforcing standards to assure a safe water supply for domestic culinary uses. It regulates any system defined as a public water system. This may be publicly or privately owned. The Drinking Water Board has adopted State of Utah Administrative Rules for Public Drinking Water Systems to help assure safe drinking water. The Drinking Water Board is empowered to adopt and enforce rules establishing standards prescribing maximum contaminant levels in public water systems. This authority is given by Title 26, Chapter 12,

Section 5 of the *Utah Code Annotated, 1953*. The rules on drinking water standards have been, and continue to be, adopted after public hearings. These standards govern bacteriologic quality, inorganic chemical quality, radiologic quality, organic quality and turbidity. The rules also prescribe monitoring frequency and sampling procedures.

The State of Utah Administrative rules for public drinking water systems must be in agreement with the federal Safe Drinking Water Act. This act sets federal drinking water standards and regulations. The 1996 Re-authorized Safe Drinking Water Act established a revolving loan program to provide money to states to construct drinking water treatment plants and other safe drinking water improvements. It also relaxes some Environmental Protection Agency requirements for setting standards for drinking water and provides more flexibility for small and rural systems. A portion of the funds provided by the program will be used by states for regional water management planning in their respective states.

The Division of Drinking Water serves as staff for the Drinking Water Board to assure compliance with federal regulations and state rules. At the local level, considerable reliance is placed on public water system operators. Presently, only community water systems that serve over 800 people, or have treatment processes in place, must have a state-certified water operator. Effective in the year 2000, however, all community public water systems will require at least one such operator. Chapter 11 discusses in detail the distinction between community and non-community public water systems.

The Division of Drinking Water also administers the Drinking Water Source Protection Program. This program is designed to protect wells and springs from surface contamination. Owners of wells and springs are required to develop protection programs based on the areas of influence around the source. The purpose of the program is to develop controls for potential sources of pollution to the groundwater. The Drinking Water Source Protection Program includes monitoring delivered drinking water quality for the detection of contamination, as well as monitoring land use activities around wells and springs for identification of pollution threats.

7.6 ENVIRONMENTAL CONSIDERATIONS

Water is an intricate part of our existence and influences many activities we are a part of each day throughout our lives. Water is most often recognized for its place in supporting our life but the other values are often ignored or placed in subordinate roles. An adequate quantity and quality of water is needed for maintenance of healthy wildlife populations and habitat. This includes providing instream flows where possible and maintaining wetland areas.

The legislature recognized the value of instream flows when it approved legislation allowing the Division of Wildlife Resources and the Division of Parks and Recreation to acquire water rights for this purpose. This authority has not been in general use in the basin as normal operation and use.

Wetlands are important features in the groundwater recharge and discharge cycles. They also provide flood storage, trap sediment, control pollution, provide food chain support and habitat for fish and wildlife, and recreation.

Grantsville Reservoir

There are two sources of pollution; geologic and man-caused. Geologic pollution is generally difficult to control. Man-caused pollution can adversely affect the surface water and the groundwater quality. Pollution sources include agriculture, onsite waste treatment systems, solid waste, mining, oil and gas exploration, and urban runoff. The West Desert Basin is primarily an agricultural area which may be a subject to pollution from pesticides and other chemicals used for insect and disease control.

7.7 DAM SAFETY

All dams in Utah which impound in excess of 20 acre-feet of water are assigned a hazard rating. Dams impounding less than 20 acre-feet may be ruled exempt by the state engineer if they do not pose a threat to human life or property. The hazard rating does not reflect the condition or reliability of the dam, but rather it reflects the potential for loss of life or occurrence of property damage in the event the dam were to fail. Hazard ratings are either high, moderate or low. The hazard rating is used to determine the frequency of inspections. High hazard dams are inspected yearly, moderate hazard dams every other year and low hazard dams every fifth year. Following the inspection, a letter from the State Engineer documents any maintenance needs and requests specific repairs. The State Engineer is empowered to declare a dam unsafe and order it breached and/or the impoundment drained. However, every effort is made to work with dam owners to schedule necessary remedial actions.

The Division of Water Rights maintains dam design standards, which are outlined in a publication entitled, *State of Utah Statutes and Administrative Rules for Dam Safety*. Plans and specifications for new construction and repair work must be consistent with these standards. Dam safety personnel monitor construction to insure compliance with plans, specifications and design reports. Any problems are resolved before final approval is given.

Table 7-2 gives the hazard rating for each of the West Desert Basin reservoirs. For information on dam owners and stream locations see, Table 6-1.

Through the year 2000, the State Engineer is assessing the ability of all high hazard dams to meet minimum safety requirements. The assessment includes seismic stability, and the ability of the dam to pass the probable maximum flood.

Table 7-2

HAZARD RATING OF EXISTING RESERVOIRS

West Desert Basin

Dam Number	Name	Built	Total Storage (acre-feet)	Hazard Rating
044	Blue Creek	1904 (modified 1986)	2,185	High
343	Grantsville	1984	3,370	High
270	Settlement Canyon	1966 (modified 1985)	1,168	High
089	Dejarnatt	1967	385	Mod
319	Etna	1959	1,471	Mod
577	Grantsville Reg. Pond	1986	31	Mod
168	Pruess Lake	1900	11,803	Mod
312	Vernon	1973	560	Mod
012	Atherley	1928	176	Low
018	Bar B Ranch	1953	82	Low
083	Death Creek	1960	228	Low
084	Deep Creek (Tooele)	1981	400	Low
123	Granite Creek	1940	186	Low
201	Meadow Creek	1929	105	Low
440	Mormon Gap	1939	90	Low
525	Rosebud	1869	18	Low
261	Rose Ranch	1963	300	Low
532	Sandarosa	1982	3,750	Low
538	State Line Creek	1984 (modified 1992)	205	Low
369	Warm Springs	1880	90	Low
139	Wrathal-Johnson	1947	227	Low